

thoroughly reviewed the outstanding Office Action including the Examiner's remarks and the references cited therein. The following remarks are believed to be fully responsive to the Office Action and, are believed to render all claims at issue patentably distinguishable over the cited references.

No claims are amended, added and cancelled herein. Accordingly, claims 9-28 remain pending.

Applicant respectfully requests reconsideration in light of the following remarks.

CLAIM REJECTION- 35 USC§102

With respect to Paragraph 2 of the outstanding Office Action, the Examiner rejected claims 9-11, 14, 16-20, 22, 24 and 26 under 35 USC 102(e) as being anticipated by Glenn et al. (U.S. 6,281,568). Claims 9, 18 and 26 are independent. Claims 10-11, 14 and 16-17 depend upon claim 9, directly or indirectly. Claims 19-20, 22 and 24 depend upon claim 18, directly or indirectly.

Applicant respectfully traverses this rejection on the grounds of the following reasons.

For the cited reference, Glenn et al., see col. 10, lines 57-60, col. 11, line 4, 9-11, 17-18, 21-22, and 25-32, and FIG. 11, teaches a package 70 in which a die 52 is attached to upper first surface of die

pad 72 with conventional epoxy die attach material 87. Die 52 extends over the perimeter of die pad 72 and over upper first surfaces 76 of leads 73 of package 70. A short bond wire 77 is connected between each bonding pad 53 on die 52 and the upper first surface 76 of lead 73. An array of solder interconnection balls 78 is formed on the lower external surface 80 of package 70, each of which is formed under one of the leads 73. Package body 81 is formed of molded encapsulant material, and a nonconductive adhesive epoxy 87 is located between lower surface 89 of die 52 and first surface 82 of die pad 72. And, where die 52 extends over leads 73, additional epoxy 87 is applied between lower surface 89 of die 52 and first surfaces 76 of leads 73 to space apart die 52 and leads 73.

In view of the teaching of Glenn et al., the bonding pad 53 is formed on die 52, and connected to the upper first surface 76 of the lead 73, and is completely encapsulated with the package body 81, i.e. molding compound. The lead 73 is also completely encapsulated with package body 81. Thus, only the lower surface 83 of die 52 is exposed out of the package body 81. Furthermore, see FIG. 11, the material of bonding pad 53 is different from that of the lead 73, both of which are different. The examiner's allegation that the portion of the upper first surface 76 of the lead 73 where the bonding wire 77 bonded on it can be served as a bonding pad is questionable.

It is apparent that Glenn et al. teaches the bonding pad 53 is formed on die 52, and completely encapsulated with the molding compound, which is different from the recitations of claims 9, 18 and

26 of the present invention "bonding pad is separated from die and connects to the die with the bonding wire, and the molding compound encapsulates a portion of the bonding pad such that the terminal of the bonding pad is exposed out of the molding compound". Hence, Glenn et al. does not anticipate claims 9, 18 and 26 of the present invention. Claims 10-11, 14, 16-17, 19-20, 22 and 24 respectively depend upon claims 9 and 18, directly or indirectly, each of which including all of the limitations of claims 9 and 18, respectively. Thus, Glenn et al. also does not anticipate these claims.

Applicant respectfully requests that the Examiner's 35 USC 102§(e) rejection of claims 9-11, 14, 16-20, 22, 24 and 26 should be reconsidered and withdrawn.

CLAIM REJECTION- 35 USC§103

1. Rejection of claims 12, 23 and 27 under 35 USC§103(a)

With respect to Paragraph 4 of the Office Action, the Examiner rejected claims 12, 23 and 27 under 35 USC §103 (a) as being unpatentable over Glenn et al. (U.S. 6,281,568) as applied to claims 9, 8 and 26 above and further in view of Huang et al. (U.S. 6,198,171). Claims 12, 23 and 27 respectively depend upon claims 9, 18 and 26.

For the cited reference, Huang et al., as the examiner's observation, which teaches the bonding wire (216) includes gold, see col. 6, line 48. Therefore, both of Glenn and Huang neither disclose nor

teach/or suggest the claimed invention, i.e. bonding pad is separated from die and connects to the die with the bonding wire, and the molding compound encapsulates a portion of the bonding pad such that the terminal of the bonding pad is exposed out of the molding compound, as claimed in claims 12, 23 and 27, each of which respectively depend upon claims 9, 18 and 26. It is not obvious for one-skilled in the art to deduce claims 12, 23 and 27 in view of Glenn and Huang, whether individually or in combination. Thus, claims 12, 23 and 27 are patentably distinguishable over the two cited references.

Applicant respectfully requests that the Examiner's 35 USC § 103 (a) rejection of claims 12, 23 and 27 should be reconsidered and withdrawn.

2. Rejection of claims 13 and 21 under 35 USC § 103(a)

With respect to Paragraph 5 of the Office Action, the Examiner rejected claims 13 and 21 under 35 USC § 103 (a) as being unpatentable over Glenn et al. (U.S. 6,281,568) as applied to claims 11 and 20 above and further in view of Fjelstad (U.S. 6,294,830). Claims 13 and 21 respectively depend upon claim 11 and 20 that depends upon claim 18.

For the cited reference, Fjelstad, as the examiner's observation, which teaches the adhesive material includes silver epoxy, see col. 4, lines 56-57. Both of Glenn and Fjelstad neither disclose nor teach/or suggest the claimed invention, i.e. bonding pad is separated from die

and connects to the die with the bonding wire, and the molding compound encapsulates a portion of the bonding pad such that the terminal of the bonding pad is exposed out of the molding compound, as claimed in claims 13 and 21, respectively depend upon claim 11 and 20 that depends upon claim 18. Thus, it is not obvious for one-skilled in the art to deduce claims 13 and 21 in view of Glenn and Fjelstad, whether individually or in combination. Thus, claims 13 and 21 are patentably distinguishable over the two cited references.

Applicant respectfully requests that the Examiner's 35 USC § 103 (a) rejection of claims 13 and 21 should be reconsidered and withdrawn.

3. Rejection of claims 15, 25 and 28 under 35 USC§103(a)

With respect to Paragraph 6 of the Office Action, the Examiner rejected claims 15, 25 and 28 under 35 USC §103 (a) as being unpatentable over Glenn et al. (U.S. 6,281,568).

Since claims 15, 25 and 28 respectively depend upon claims 9, 18 and 26, each of which respectively includes all the limitations of the claim depended upon. Thus, as the above dispute, Glenn neither disclose nor teach/suggest the recitations of claims 15, 25 and 28. These claims are patentably distinguishable over Glenn.

Applicant respectfully requests that the Examiner's 35 USC § 103 (a) rejection of claims 15, 25 and 28 should be reconsidered and

withdrawn.

Conclusion

In light of the above remark, Applicant submits that claims 9-28 patentably distinguish over the cited prior arts. Applicant respectfully submits that all pending claims 9-28 are in condition for allowance. Favorable reconsideration is respectfully requested.

Respectfully

submitted,

Antony 1/3/03

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